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Re-Spinning Entrepreneurship Education in

the Age of Artificial Intelligence

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ABSTRACT: Artificial intelligence (AI) has emerged as a powerful catalyst for change in numerous industries including higher education and entrepreneurship education which is not an exception as Artificial intelligence has been identified as the future. The research investigated the nexus between Artificial Intelligence and Entrepreneurship Education. Concentrating on students' knowledge of and use of ChatGPT, opinions on its advantages and drawbacks, and ways to include this technology into classes on entrepreneurship education. From idea generation, to business model creation, creating a business plan, or client interviews, AI technologies like ChatGPT may be transforming in many tasks as entrepreneurship education changes with AI developments

Highlighting that policies and pedagogical practices in the course of the use of Artificial Intelligence such as chatGPT can equip students with entrepreneurial mindsets and the ability to innovate and adapt in this dynamic landscape. Identifying the competencies and skills necessary for graduates to thrive in a rapidly evolving Artificial Intelligence driven entrepreneurship landscape influenced by the adoption of AI technologies. Adopting a literature review methodology. Demonstrating the integration of Artificial Intelligence tool such as ChatGPT into assignments and class activities enabling the students to learn more about entrepreneurship and cultivate the critical thinking and curiosity abilities they need. Moreover, it has been demonstrated that incorporating Artificial Intelligence specifically chatGPT may help students develop their entrepreneurial mindset and skill The findings of the study show that ChatGPT might help to boost some kinds of creativity, simplify procedures, and raise students' efficiency. Emphasizing the need of utilizing ChatGPT critically, the paper also discusses issues about its correctness and dependability. The study therefore recommended that tertiary institutions as providers of deep knowledge needed for the formation of new enterprises that arise from technological use should prepare the students ahead for the challenge of the AI-Driven entrepreneurial world viz infrastructure, reorientation and institutional support.

KEYWORDS: Artificial intelligence, chatGPT, Entrepreneurship Education, entrepreneurial mindsets

I. INTRODUCTION

The global trend of all sectors has migrated to the adoption of Artificial Intelligence and studies (Asaaty, Sengupta & Carter, 2021; Bassey, Brownson, Efi; 2025; Kabir, 2018; Nadeem, 2020; Sena & Nocker, 2021) have indicated the relevance of Artificial Intelligence in all sectors. It has emerged as a powerful catalyst for change in numerous industries as it presents novel opportunities (Ainah, 2024; Agrawal, McHale, & Oettl, 2024). Artificial intelligence application is a prominent topic extensively covered in the technology and commercial sectors, according to Bassey, Brownson & fi, (2025; Bekuru and Nwinyokpugi (2021). In this era which is increasingly characterized by the transformative influence of artificial intelligence (AI), the intersection of higher education policies in entrepreneurship education has emerged as a critical area of inquiry. Artificial intelligence (AI) has emerged as a powerful catalyst for change in numerous industries including higher education and entrepreneurship education for employability which is not an exception as Artificial intelligence has been identified as the future. It is imperative that the curriculum for entrepreneurship education be updated. As a result, the pedagogy and curriculum of entrepreneurship education must keep up with the rapid advancements in today's digitally networked and virtual world, which have already started to



have a significant impact on the implementation of the marketing mix, target marketing, and the relationship between businesses and their clientele. Artificial intelligence is currently used for advertisement, sales, to answer or guide customer service inquiries etc. The digital transformation is akin to a swiftly advancing tsunami, as the digitization of numerous business processes is forming new connections between companies and their clientele and transforming the marketing environment.

However, looking around, we are clear that it is currently the present. Artificial intelligence (AI) has been shown to be a situation whereby machines conduct tasks ordinarily carried out by humans. It is also seen as a whole term that explains machine learning methods and tools applied to evaluate, display, and understand medical data. New technologies continually change the sphere of education and teaching, which benefits different sectors including teachers where the use of artificial intelligence in educational materials has resulted in more interesting, demanding, and flexible approaches of instruction, most importantly, areas that has to do with teaching, learning, and writing research articles, so effectively embracing the entrance of artificial intelligence into the higher education sector.

Understanding the impact of artificial intelligence on the dynamics of sectors of countries of the world helps one to investigate its present and future uses in higher education, including teaching, learning, and writing as well as the possible difficulties during its implementation. Artificial intelligence (AI) is becoming accessible in many spheres of society, including higher education (Pardhan & Drydakis, 2022; Bessen, Impink, Reichensperger, & Seamans, 2022; Chukwuka, & Dibie, 2024). It involves emulation of human intelligence processes by machines mainly computer systems. Ikegwuru, Jack and Amadi (2023) claim that in the modern corporate environment, artificial intelligence use in daily operations has evolved to be a strong drift in many entrepreneurship activities of industries. Since a growing amount of their operations are now turning out to be AI driven, developing the capacity to digitally revolutionize or change entrepreneurship processes using artificial intelligence becomes more crucial for enterprises Cuellar, Larsen, Lee, & Webb, (2024). However, how to maximize AI application adoption into entrepreneurship education remains a mirage (Agarwall, Das & Swain, (2021). By means of creative ideas/products/services/technologies and the foundation of ventures produced by entrepreneurship, individuals who engage in entrepreneurship education and start their own businesses have the potential to lower the unemployment ratio and boost the amount of economic growth. While social science battles with this intelligent technology due of ill-structured material, artificial intelligence has been embraced in science, technology, engineering, and mathematics teaching and learning at all levels of education institutions (Bassey, Brownson, Efi, (2025) while generative artificial intelligence and its applications are increasingly used.

The use of chatgpt as an Artificial Intelligence has been studied in a number of educational contexts, such as medical and nursing training (Chang et al., 2022; Khan et al., 2023), engineering (Qadir, 2022), computer science (Okonkwo & Ade-Ibijola, 2020), and law (Choi et al., 2023), but there is a lack of studies on the use of AI-powered Chatbots in entrepreneurship education, including entrepreneurship education. Although the scholarly community is increasingly interested in the application of artificial intelligence in entrepreneurship education, additional research is required to identify how various AI technologies may be applied to assist entrepreneurship teachers and students (Chen et al., 2021; Ratten & Jones, 2021). AI systems might be applied in numerous ways in entrepreneurship education. Entrepreneurship education's future will probably be technology-driven, with immersive in teractions using artificial intelligence and augmented reality (Hoffreumon, Forman & Van Zeebroeck, 2024). It is imperative to integrate such technologies and viewpoints in the classroom as new business graduates must be conversant with the technological developments upsetting the way companies are developed, run, and scaled. Following the above, the paper investigates the advantages and disadvantages of using ChatGPT as an artificial intelligence tool in entrepreneurship education.

II. LITERATURE REVIEW

Artificial Intelligence

Artificial intelligence is the emulation of human intelligence processes by machines—more notably, computer systems. Expert systems, speech recognition, machine vision, and natural language processing also find place here. It emphasizes three cognitive areas: learning, thinking, and self-correction procedures (Mishra & Tripathi, 2022). Small firms have been underlined to need artificial intelligence implementation (Sureka, 2022). Artificial intelligence improves marketing; it assists salespeople; it improves customer engagement; it supports competitive intelligence; it boosts cybersecurity; it may take the customer connection and integration to the next degree. Early adopters of artificial



intelligence small businesses will be strong enough to gain the advantages of a variety of operational capabilities and obtain a competitive edge (Sureka 2022).

ChatgPT

ChatGPT is a robot for chats. This program employs artificial intelligence to converse with people in natural language via voice or text interactions. Mikalef, Islam, Parida, Singh, and Altwaijry, 2023) Aimed at providing information for individual students on particular issues, chatbots have been increasingly used in higher education following recent developments in Natural Language Processing (Bekuru & Nwinyokpigi, 2021). With students actively using chatbots to obtain information, ask questions, and get assistance with various assignments and activities (Odoh, 2024).), the present studies on the deployment of chatbots in higher education often revealed favorable outcomes (Ola-Oluwa, 2024).). Particularly in helping teachers with their workload and providing a more interesting learning environment for their pupils, chatbots can help alleviate the issue of insufficient student-instructor inter activity. ChatGPT, an artificial intelligence language model derived on the Generative Pretrained Transformer technology, a deep learning method producing text like to human writing, is now among the most often used chatbots accessible to the public. OpenAI, a lab researching several artificial intelligence systems including machine learning, robotics, and natural language processing, debuted a free ChatGPT preview in November 2022.

Education Entrepreneurship

Designed to provide people with the information, skills, and mentality required to see business opportunities, innovate, and effectively run entrepreneurial enterprises, entrepreneurship education is a collection of organized teaching and learning programs. It gets people ready not just to launch and run their own companies but also to efficiently and creatively participate in many capacities inside current companies (Winkler, Hammoda, Noyes, & Van Gelderen, 2023). Entrepreneurship education, according to Rotimi, Enimola and Ochidi (2021), can be regarded as the direction given to groups or individuals to help the improvement of their natural entrepreneurial abilities, acquire the expertise, abilities, behaviors and values needed to start successful businesses in their vicinities and make a decent living. From (Zellweger & Zenger, 2023). perspective entrepreneurship education is the instruction of information and skill that will equip future graduates to design, launch, and operate their own business. Entrepreneurship education aims to inspire students to be creative, therefore helping them to see chances for innovation and motivate same to turn ideas into focused, practical actions in the social, cultural, or financial environment. Agbonna, Asikhia, Makinde & Akinlabi, 2019). (Bejjani, Göcke, & Menter, 2023) suggests that teaching entrepreneurship is a means of changing motives and attitudes. According to (Ben, Brownson, & Akpaetor, 2023) entrepreneurship education wants people especially young people to be more enterprising persons who either own businesses or act as entrepreneurial thinkers helping to create sustainable communities and economic growth. According to the Consortium for Entrepreneurship Education (2008), developing innovative thinking and a strong feeling of self-worth and empowerment is equally important as teaching someone else how to operate a firm. In this regard, (Fritsch & Wyrwich, 2023).) say that alongside knowledge and skills in business, entrepreneurship education is primordially about the development of beliefs, values, and attitudes which aim to drive the students to consider entrepreneurship as an attractive and valid alternative to paid employment or unemployment.

III. METHODOLOGY

The approach used for this study comprises a systematic literature search, selection criteria, thematic analysis, and synthesis of results pertinent to entrepreneurship education and how it affects self-employment and skill development. The literature search made use of many academic resources, including Google Scholar, JSTOR, ERIC (Education Resources Information Center), and Scopus, therefore guaranteeing a thorough evaluation.

Findings

Artificial Intelligence (Chatgpt) and Entrepreneurship Education

In the present era which has been increasingly characterized by the transformative influence of artificial intelligence (AI), the intersection of higher education policies, entrepreneurship education and graduate employability has emerged as a critical area of inquiry (Gofman & Jin, 2024). Artificial intelligence (AI) has emerged as a powerful catalyst for change in numerous industries (Bassey, Brownson, Efi, 2025; Chukwuka, & Dibie, 2024; Cuellar, Larsen, Lee, & Webb, 2024) including higher education and entrepreneurship education which is not an exception. This study explored how higher education policies can be channeled towards pedagogical practices of entrepreneurship education and



Educational policies to enhance employability in the era of adoption of Artificial intelligence Vecchiarini et al., 2023; Agarwall, Das, & Swain, 2021). By pedagogical practices of entrepreneurship education, (Agrawal, McHale & Oettl, 2024; Mikalef, Islam, Parida, Singh & Altwaijry, 2023). I mean the methods, strategies, and techniques used to teach entrepreneurial concepts, skills, and mindsets. It encompasses the "how" of teaching entrepreneurship, focusing on the design and delivery of educational experiences that effectively prepare individuals for entrepreneurial endeavors. Essentially, it's about the teaching methods and the learning environment that are considered most effective for fostering entrepreneurial capabilities. As artificial intelligence (AI) continues to the global economy, shape the landscape of the labour market, higher education institutions face the challenge of preparing students for an increasingly complex and technologically driven employment market (Ainah, 2024; Bassey, Brownson, Efi, 2025). The integration of AI into entrepreneurship education curriculum is essential for developing the necessary skills and mindset in graduates to navigate this new era for employability trend. The research plans to investigate Higher education policies and pedagogical strategies which can best equip students with entrepreneurial mindsets and the ability to innovate and adapt in this dynamic landscape identifying the competencies and skills necessary for graduates to thrive in a rapidly evolving job market influenced by the adoption of AI technologies (Brownson, 2021; Bejjani, Göcke, & Menter, 2023). The proliferation of AI technologies is transforming industries, creating new opportunities and demands for innovative solutions. Graduates must not only be proficient in their specific disciplines but also possess a strong understanding of AI applications in entrepreneurship towards employability and relevance in this time and age (Cuellar, Larsen, Lee, & Webb, 2024)..

This is based on the premise that Employers increasingly seek candidates who can leverage AI technologies for work atmosphere, innovation, problem-solving, and decision-making etc. (Ebuka, Emmanuel & Idigo, 2023; Fossen & Neyse, 2024; Giuggioli, & Pellegrini, 2023). Therefore, there is need to examine how higher education institutions policies are identifying the gap and bridging the gaps in skill sets by incorporating AI-related content into entrepreneurial curricula which can be made possible through Higher education policies and pedagogical practices towards the promotion of the development of interdisciplinary curricula that integrate AI principles with entrepreneurship education. This could include courses on AI technology, data analysis, and machine learning, alongside entrepreneurship theory and practice. Corroboratively, higher education policies are required to strategically position and Incorporating AI-related content into entrepreneurial curricula viz Curriculum Integration Strategies, Foundational AI Concepts and Principles, AI Tools and Technologies for Entrepreneurship, Developing AI-Driven Business Models and Strategies, Assessment among others. Integration of Artificial Intelligence (AI) concepts, tools, applications, and considerations into the existing structure and content of courses and programs designed to teach entrepreneurship. It's not about just adding a single, isolated AI course, but rather, weaving AI-related elements into the fabric of the entrepreneurship curriculum to better prepare students for the evolving business landscape. By incorporating AI-related content into entrepreneurial curricula, higher education institutions can better equip their students with the skills and knowledge needed to thrive in the increasingly AI-driven business world and to identify and capitalize on new entrepreneurial opportunities that arise from the technology. This includes a focus on integrating AI at the core of business model development but it cannot be done outside of the policies backing up higher education viz the curricular which needs to be looked into and strategically placed. In essence, pedagogical practices for entrepreneurship education go beyond simply conveying theoretical knowledge. They are about creating engaging, practical, and supportive learning experiences that empower individuals to think and act like entrepreneurs. The goal is to cultivate not just knowledge but also the crucial skills and mindset necessary for entrepreneurial success (Gofman & Jin, 2024). Because a variety of digital tools, including automation, blockchain, artificial intelligence (AI) and big data, gamification, the Internet of Things, augmented reality, machine learning, robots, virtual reality, and 3D printing, have been introduced into entrepreneurship activities, it is imperative that the curriculum for entrepreneurship education be updated. As a result, the pedagogy and curriculum of entrepreneurship education must keep up with the rapid advancements in today's digitally networked and virtual world, which have already started to have a significant impact on the implementation of the marketing mix, target marketing, and the relationship between businesses and their clientele. As an example, artificial intelligence is currently used to answer or guide customer service inquiries. The digital transformation is akin to a swiftly advancing tsunami, as the digitization of numerous business processes is forming new connections between companies and their clientele and transforming the marketing environment. A significant shift has been brought about by the continuous digitization of entrepreneurial processes, which has disrupted marketing strategies and produced new avenues for communication between companies and consumers. In order to contribute in a future where robots will coexist with human experts, students must be exposed to such cutting-edge technology and develop the conceptual, inquiry, critical thinking, creative, and integrative learning abilities necessary.



This is demonstrated by the McKinsey Global Institute report, which projected that digitalization may boost global GDP by an extra \$13 trillion by 2030. This suggests that industries with high degrees of digitalization typically see notable increases in productivity (McKinsey Global Survey, 2021).

Consider a section of the course on entrepreneurship that covers "AI-Powered Content Creation." The module can include more than simply entrepreneurial lectures; it can also include:

1. Introducing AI-Powered Tools in Entrepreneurship: Showing and allowing students to try out tools like Copy.ai, which generates a wide range of content, including product descriptions, blog posts, social media posts, sales emails, and more; Jasper.ai, which helps businesses build a market world by elevating an entrepreneur's dream, brand, marketing, and advertisement of their product thereby increasing sale; and chat-bots, which mimic human-user conversation while attending to customers.

2. Examining AI-Generated Content: Talking about the generated content's quality, pointing out its advantages and disadvantages, and looking at methods to improve it.

3. Combining AI with Human Creativity: Stressing the value of human supervision and editing to make sure that the material produced by AI fits the target market, the brand's voice, and the marketing goals. 4. Projects: Assign the students to write a blog post for a hypothetical startup company using an AI might be used to provide students tailored feedback on their pitch presentations and company proposals. Students could have quicker access to pertinent data, including market statistics, intellectual property, entrepreneurial capital, and licenses and permissions. With the use of AI chat-bots like ChatGPT, students may be able to better evaluate or spot business prospects by recognizing and analyzing patterns in huge datasets. Since AI may assist new venture processes in a variety of ways, it is seen as a facilitator for entrepreneurs. The issue then becomes, how might AI facilitate entrepreneurship education? The growth of the business environment and technology innovation have been the driving forces behind the development of entrepreneurship education from its start (Fritsch & Wyrwich, 2023; Vecchiarini et al., 2023). Since universities are under increasing pressure to produce graduates with an entrepreneurial mindset who can assist modern society with its current needs and challenges, we can anticipate that entrepreneurship education will also change and adapt to the new technological standards as entrepreneurship itself continues to change and develop under the enabling force of Artificial Intelligence.

IV. CONCLUSION AND RECOMMENDATIONS

Students are more inclined to learn about a subject and engage in entrepreneurial activities when artificial intelligence (AI) is employed and taught in the classroom (Giuggioli & Pellegrini, 2022; Khalid, 2020; ChatGPT has the ability to improve a number of entrepreneurship education activities, including performing customer development interviews, preparing for pitch presentations, evaluating current company ideas, and investigating new ones. Artificial Intelligence (ChatGPT) can provide students who want to build something new real-time advice. Students may use ChatGPT to do sentiment analysis and decipher public perceptions and trends about their enterprise, or they could use it to discover possible problems and barriers in their sector and receive guidance on how to solve them (Bassey, Brownson, Efi; 2025; Mikalef, Islam, Parida, Singh, and Altwaijry, 2023; Vecchiarini et al., 2023;. This study demonstrated that integrating Artificial Intelligence tool such as ChatGPT into assignments and class activities it can enable the students to learn more about entrepreneurship and cultivate the critical thinking and curiosity abilities they need. There are significant theoretical and practical ramifications to this study. Furthermore, through the use of ChatGPT as an enabler, teachers may build a more customized and engaging learning environment that encourages students' interest and active involvement by utilizing AI technologies such as ChatGPT. Students may investigate and apply information in a realworld setting by using Artificial Intelligence tool such as ChatGPT in the classroom to support experiential learning and give them interactive learning opportunities. These exercises can help them think more critically, develop their problem-solving abilities, and get a deeper grasp of the corporate world. It has been demonstrated that incorporating AI specifically ChatGPT into entrepreneurship education may help students develop their entrepreneurial mindsets and skills. Students may investigate and verify their entrepreneurial ideas with ChatGPT. They may enhance their ideas, compare themselves to rivals, and find possible market possibilities by having interactive discussions with AI and getting real-time feedback, suggestions, and insights. This real-world use of Artificial Intelligence ChatGPT can help students think critically while saving time and resources.

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